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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/466,627	12/17/1999	MING-LING LO	YO999-429	1398

7590 03/12/2004  
ANNE E BARSCHALL  
80 BENEDICT AVENUE  
TARRYTOWN, NY 10591

EXAMINER
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NGUYEN, MAIKHANH

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 03/12/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

2

<b>Office Action Summary</b>	Application No. 09/466,627	Applicant(s) LO ET AL.	
	Examiner Maikhanh Nguyen	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 7-12, 16-46, 48-49, 51-61, 63-64 and 66-86 is/are pending in the application.
- 4a) Of the above claim(s) 10-12, 16-21, 49, 51, 52, 64, 66 and 67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-9, 22-46, 48, 53-61, 63 and 68-84 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### ***DETAILED ACTION***

1. This action is responsive to communications: Election filed 12/21/2003 to the original application filed 12/17/1999.
2. Claims 1-3, 7-9, 22-46, 48, 53-61, 63 and 68-86 are elected for examination. Claims 4-6, 13-15, 47, 50, 62 and 65 have been canceled. Claims 1, 3, 7, 9, 22, 24, 30, 46, 53-54, 61, 75 have been amended; claims 76-86 have been added. Claims 1, 46 and 61 are independent claims.

### ***Claim Objections***

3. Claim 63 is objected to because of the following informalities: it cannot depend on a cancelled claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7-9, 22-46, 48, 53-61, 63 and 68-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Turau** "Making Legacy Data Accessible for XML Application"

(Publication date 10/1999 – Please note the attachment) in view of **Tim Bray** “How the Annotated XML Specification Works” (Publication date 09/1998).

**As to independent claim 1**, Turau teaches a computer method, comprising executing at least the following operations in at least one data processing device (*page 2; servers, clients*): using a pre-established DTD corresponding to desired XML (*Fig. 1 shows a relational table, the resulting DTD, and the corresponding XML document; page 3 & The generation of internal DTD ..., since DTD must be defined at the beginning of a file; page 7, first paragraph*).

Turau, however, is silent on “based on the DTD and a plurality of data sources, adding annotations to the DTD to create an annotated DTD, such that an XML document generated from the annotated DTD is guaranteed to conform to the DTD”.

Bray teaches based on the DTD and a plurality of data sources, adding annotations to the DTD to create an annotated DTD, such that an XML document generated from the annotated DTD is guaranteed to conform to the DTD (*annotations had to carry around all those attributes ...there is an annotation ...DTD keywords ... this annotation is attached to the first definition of each of these keywords; pages 2-5*).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Bray with Turau because it would have provided the capability for efficiently implementing annotations in the XML documents.

**As to dependent claim 2**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 3**, Turau teaches at least one processor configured to use the at least one medium to produce the XML document (*mapping of relational data into XML ...generated XML documents; page 4, lines 5-30*), but silent on “annotated DTD”.

Bray teaches annotated DTD (*pages 2-5*).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Bray with Turau because it would have provided the capability for efficiently implementing annotations in the XML documents.

**As to dependent claim 7**, Turau teaches the data source is a relational database (*relational database; page 3, lines 27-30*).

**As to dependent claim 8**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 9** includes the same limitations as in claim 3, and is similarly rejected under the same rationale.

**As to dependent claim 22**, Turau teaches associating values and or formulas with a DTD (*the resulting DTD; page 3, lines 4-19 and Fig. 1*).

**As to dependent claim 23**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 24** includes the same limitations as in claim 3, and is similarly rejected under the same rationale. However, claim 24 further recites “perform the associating operation”.

Turau teaches perform the associating operation (*mapping general XML document into relational structures; page 3, line 1-19*).

**As to dependent claim 25**, Turau teaches associating one or more lists of data objects (*meta data is associated with these elements; page 4, lines 14-18*) or formulas producing data objects with each DTD construct having a repetition symbol at the end.

**As to dependent claim 26**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 27**, Turau teaches a data processing device; and at least one processor (*processor; page 4, lines 9-10*) configured to use the at least one medium to produce the XML document (*the generated XML documents; page 7, lines 5-9*); and perform the associating operation (*mapping general XML document into relational structures; page 3, line 1-19*).

**As to dependent claim 28**, Turau teaches the associating includes associating one or more lists of data objects or formulas producing data objects with each DTD construct which is not a #PCDATA, a choice list, or an attribute list, and does not end with a repetition symbol (*page 2*).

**As to dependent claim 29**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 30** includes the same limitations as in claim 24, and is similarly rejected under the same rationale.

**As to dependent claim 31**, Turau teaches associating includes associating a value or formula producing a value with each PCDATA, choice list, or attribute definition (*Meta data is associated with these elements using attributes; page 4, lines 12-17*).

**As to dependent claim 32**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 33** includes the same limitations as in claim 24, and is similarly rejected under the same rationale.

**As to dependent claim 34**, Turau teaches associating includes, not necessarily in the following order: first associating one or more lists of data objects, or formulas producing data objects with a DTD construct; second associating at least one of the lists or formulas with at least one variable name; and using the variable name as a parameter in at least one other formula (*page 2*).

**As to dependent claim 35**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 36** includes the same limitations as in claim 24, and is similarly rejected under the same rationale.

**As to dependent claim 37**, Turau teaches associating at least one respective environment with a respective XML element to be generated (*the generated XML documents; page 7, lines 5-9*).

**As to dependent claim 38**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 39** includes the same limitations as in claim 24, and is similarly rejected under the same rationale.

**As to dependent claim 40**, Turau teaches the at least one environment comprises information from a parent XML element of the respective XML element; and information from a binding specification of a DTD construct associated with the respective XML element (*Fig. 1*).

**As to dependent claim 41**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 42** includes the same limitations as in claim 24, and is similarly rejected under the same rationale.

**As to dependent claim 43**, Turau teaches the mapping includes at least one respective specification corresponding to at least one respective XML element the specification comprises at least one parameter for receiving a value upon generation of an XML document; and the method further comprises, upon generation of an XML document, sending the at least one parameter a value according to at least one variable/value pair in the at least one respective environment (*page 3, line 4 – page 4, line 40*).

**As to dependent claim 44**, “at least one medium readable by a data processing device” is inherent to the system of Turau.

**As to dependent claim 45** includes the same limitations as in claim 24, and is similarly rejected under the same rationale. However, claim 45 further recites “sending operations.”

Turau teaches sending operations (*page 3*).

**Independent claim 46** is directed to at least one medium readable for implementing the method of claim 1, and is similarly rejected under the same rationale.

**Dependent claim 48** includes the same limitations as in claim 7, and is similarly rejected under the same rationale.



**Dependent claim 53** includes the same limitations as in claim 22, and is similarly rejected under the same rationale.

**Dependent claim 54** includes the same limitations as in claim 25, and is similarly rejected under the same rationale.

**Dependent claim 55** includes the same limitations as in claim 28, and is similarly rejected under the same rationale.

**Dependent claim 56** includes the same limitations as in claim 31, and is similarly rejected under the same rationale.

**Dependent claim 57** includes the same limitations as in claim 34, and is similarly rejected under the same rationale.

**Dependent claim 58** includes the same limitations as in claim 37, and is similarly rejected under the same rationale.

**Dependent claim 59** includes the same limitations as in claim 40, and is similarly rejected under the same rationale.

**Dependent claim 60** includes the same limitations as in claim 43, and is similarly rejected under the same rationale.

**Independent claim 61**, the rejection of independent claim 1 above is incorporated herein in full. However, claim 61 further recites:

- means for receiving data from at least one data source; and
- at least one processor

Turau teaches:

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- “means for receiving data from at least one data source” is inherent to the system of Turau ; and

- at least one processor (*servers, clients; page 2/SXL processors; page 4*)

**Dependent claim 63** includes the same limitations as in claim 7, and is similarly rejected under the same rationale.

**Dependent claim 68** includes the same limitations as in claim 22, and is similarly rejected under the same rationale.

**Dependent claim 69** includes the same limitations as in claim 25, and is similarly rejected under the same rationale.

**Dependent claim 70** includes the same limitations as in claim 28, and is similarly rejected under the same rationale.

**Dependent claim 71** includes the same limitations as in claim 31, and is similarly rejected under the same rationale.

**Dependent claim 72** includes the same limitations as in claim 34, and is similarly rejected under the same rationale.

**Dependent claims 73-75** include the same limitations as in claims 58-60, and are similarly rejected under the same rationale.

**As to dependent claims 76 and 79-80**, Turau teaches the pre-established DTD corresponds to multiple heterogeneous data sources (*page 7, first paragraph*).

**Dependent claim 78** includes the same limitations as in claim 3, and is similarly rejected under the same rationale.

**Dependent claims 81-83**, Turau teaches the mapping returns at least one scalar value, at least one list of scalar values, and at least one SQL call result (*Fig.3*).

**Dependent claims 84-86**, Turau teaches the mapping is responsive to a user mapping specification (*page 3, line 4 – page 4, line 40*).

### ***Response to Arguments***

5. Applicants' arguments with respect to claims 1-3, 7-9, 22-46, 48, 53-61, 63, and 68-84 have been considered but they are not persuasive.

Applicant argues that *the Examiner has not presented a prima facie case of obviousness, because the date of publication of the primary reference has not been established. The Examiner has included a page from the online publication indicating a document creation date of July 14, 1999. However, the date the document was created by a piece of software is not necessarily the date the document was published.* (Remarks, page 19, first paragraph)

In response, Tarau reference was published in October 1999 as clarified by Dr. Tarau, the author of the article (this information is provided in the attachment).

Applicant argues that *the independent claims have been amended to recite the use of a pre-established DTD. The Turau document generates DTD's on the fly. It does not use a pre-established DTD.* (Remarks, page 19, second paragraph)

In response, the Examiner disagrees. The Turau document uses a pre-established DTD (DTD must be defined at the beginning of a file; page 7, first paragraph), not DTD's on the fly.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

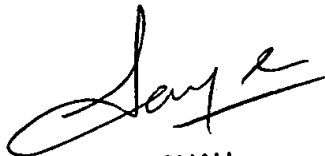
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maikhanh Nguyen whose telephone number is (703) 306-0092. The examiner can normally be reached on Monday - Friday from 9:00am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on (703) 305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maikhanh Nguyen  
March 5, 2004



SANJIV SHAH  
PRIMARY EXAMINER

Nguyen, Maikhanh

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**From:** Green, Shirelle  
**Sent:** Wednesday, November 05, 2003 7:16 AM  
**To:** Nguyen, Maikhanh  
**Subject:** FW: FW: Information Request

Please see below for date of paper...

Shirelle Green  
Technical Information Specialist  
US Patent & Trademark Office  
Scientific & Technical Information Center / EIC 2100  
CPK 2, 4B40  
Phone: 703-306-4767  
Fax: 703-306-5509  
With God all things are possible... Without Him, nothing is...

-----Original Message-----

From: turau@tuhh.de [mailto:turau@tuhh.de]  
Sent: Wednesday, November 05, 2003 4:15 AM  
To: Green, Shirelle  
Subject: Re: FW: Information Request

Dear Shirelle Green,

my paper with the title "Making legacy data accessible for XML applications" was published in October 1999 as a technical report.

Best wishes from Hamburg

prof. dr. v. turau

Shirelle.Green@USPTO.GOV wrote:

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> //
>
>
> /Good Afternoon Professor ,/
>
> //
> /I am contacting you from the Scientific Library at the US Patent &
> Trademark Office./
> //
> /One of our users has located a copy of your paper entitled, "Making
> legacy data accessible for XML applications." However, there was no
> date of publication listed. Therefore, please provide with the date of
> publication for this article./
> //
> /Thank you./
>
> /Shirelle Green/
> /Technical Information Specialist/
> /US Patent & Trademark Office/
> /Scientific & Technical Information Center / EIC 2100/
> /CPK 2, 4B40/
> /Phone: 703-306-4767/
> /Fax: 703-306-5509
> With God all things are possible... Without Him, nothing is.../
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